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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,421	12/09/2003	Mohan Krishnan	279.650US1	3925

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EXAMINER	
SMITH, TERRI L	

ART UNIT	PAPER NUMBER
3762	

DATE MAILED: 10/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/731,421	KRISHNAN ET AL.	
	Examiner	Art Unit	
	Terri L. Smith	3762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 September 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,7-20 and 24* is/are pending in the application.

4a) Of the above claim(s) *2-4,8,19 and 20* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,5,7,9-18 and 24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 September 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *9-19-05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Examiner finds the allowable subject matter of claims 6, 7, and 13 in the Office Action dated June 20, 2005 withdrawn in light of new art found. Consequently, Applicant's arguments/amendments with respect to claims 1–5, 7–20, and 24 have been considered but are moot in view of the new ground(s) of rejection.

Election/Restrictions

2. Claims 2–4, 8, and 19–23 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 08 April 2005.

Drawings

3. The drawings were received on 04 August 2005. These drawings are acceptable.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office Action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the Examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the Examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1, 5, 7, 9, 10, 17, 18, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vachon, U.S. Patent 5,861,023 and in view of Helland, et al., U.S. Patent 5,318,572.

Vachon discloses a lead body extending from a proximal end to a distal end; and an electrode coupled to a lead body (Fig. 1); a lead body and an electrode each have an outer surface adapted to passively prevent and means for passively preventing formation of clots on outer surfaces (column 1, lines 9–12; column 4, lines 13–21); an outer surface of a lead does not include any active coatings which elute from the surface to minimize clotting (Figs. 1–2; column 5, lines 28–31with the materials being those listed in column 4, lines 16–20); is coupled to a pulse generator and is adapted for delivering cardiac resynchronization therapy (column 5, line 12; column 1, lines 15–29; column 3, lines 43–46 and 56–60); an electrode includes a tip electrode (Fig. 1, element 20). Vachon does not disclose an outer surface of an electrode includes a textured coating including titanium microspheres nor titanium microspheres have a diameter of between 75–100 μm nor titanium microspheres are dimensioned to attract circulating blood cells so as to develop a uniform and tightly adherent biologic surface.

However, Helland discloses an outer surface of an electrode includes a textured coating including titanium microspheres and titanium microspheres have a diameter of between 75–100 μm and titanium microspheres are dimensioned to attract circulating blood cells so as to develop a uniform and tightly adherent biologic surface (column 3, lines 31–33; column 5, lines 46–49 and 51; column 6, lines 36–38; column 10, lines 3, 30–32 and 19–20; column 6, lines 5–17) to

increase the active surface area and enhance electrical efficiency (column 3, lines 26–27) and to provide interstitial porosity for tissue ingrowth (column 10, lines 34–35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the invention of Vachon to include an outer surface of an electrode includes a textured coating including titanium microspheres and titanium microspheres have a diameter of between 75–100 μm and titanium microspheres are dimensioned to attract circulating blood cells so as to develop a uniform and tightly adherent biologic surface, as taught by Helland, to increase the active surface area and enhance electrical efficiency (column 3, lines 26–27) and to provide interstitial porosity for tissue ingrowth (column 10, lines 34–35).

In the alternative, see the 35 U.S.C. 103(a) rejection below for claims 7 and 18.

7. Claims 11–16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mar et al., U.S. Patent 5,411,544 and in view of Helland, et al., U.S. Patent 5,318,572.

Mar discloses a lead body extending from a proximal end to a distal end, an electrode coupled to a lead body (Fig. 1), a lead body has a textured outer surface adapted to passively prevent formation of clots on the outer surface and has a textured outer surface (column 4, lines 36–38); an outer surface of a lead does not include any active coatings which elute from the surface to minimize clotting (column 3, lines 42–54); is coupled to a pulse generator and is adapted for delivering cardiac resynchronization therapy (column 1, lines 8–10). Mar does not disclose an electrode includes an outer textured surface including titanium microspheres nor titanium microspheres have a diameter of between 75–100 μm nor an electrode outer surface adapted to trap blood cells within a textured surface to form a layer of blood cells on an electrode

surface nor titanium microspheres are dimensioned to attract circulating blood cells so as to develop a uniform and tightly adherent biologic surface. However, Helland discloses an electrode includes an outer textured surface including titanium microspheres and titanium microspheres have a diameter of between 75–100 μm (column 3, lines 31–33; column 5, lines 46–49 and 51; column 6, lines 36–38; column 10, lines 3, 30–32, and 19–20) to increase the active surface area and enhance electrical efficiency (column 3, lines 26–27); and an electrode outer surface adapted to trap blood cells within a textured surface to form a layer of blood cells on an electrode surface (Figs 3 and 4) and titanium microspheres are dimensioned to attract circulating blood cells so as to develop a uniform and tightly adherent biologic surface (column 6, lines 5–17) to provide interstitial porosity for tissue ingrowth (column 10, lines 34–35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the invention of Mar to include an electrode includes an outer textured surface including titanium microspheres and titanium microspheres have a diameter of between 75–100 μm and an electrode outer surface adapted to trap blood cells within a textured surface to form a layer of blood cells on an electrode surface and titanium microspheres are dimensioned to attract circulating blood cells so as to develop a uniform and tightly adherent biologic surface, as taught by Helland, to increase the active surface area and enhance electrical efficiency (column 3, lines 26–27) and to provide interstitial porosity for tissue ingrowth (column 10, lines 34–35).

In the alternative, see the 35 U.S.C. 103(a) rejection below for claim 15.

8. Claims 7 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vachon, U.S. Patent 5,861,023 and Helland, et al., U.S. Patent 5,318,572 as applied to claims 1 and 17 above, and further in view of MacGregor, U.S. Patent 4,936,317.

Vachon does not disclose titanium microspheres are dimensioned to attract circulating blood cells so as to develop a uniform and tightly adherent biologic surface. However, MacGregor discloses titanium microspheres are dimensioned to attract circulating blood cells so as to develop a uniform and tightly adherent biologic surface (column 1, lines 57–60; column 2, lines 61–67; column 3, lines 33, 58–60; column 5, lines 32–33) rendering the surface non-thrombogenic and resistant to the formation of blood clots (column 2, lines 67–68; column 1, lines 60–61).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the inventions of Vachon and Helland to include titanium microspheres are dimensioned to attract circulating blood cells so as to develop a uniform and tightly adherent biologic surface, as taught by MacGregor rendering the surface non-thrombogenic and resistant to the formation of blood clots (column 2, lines 67–68; column 1, lines 60–61).

9. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mar et al., U.S. Patent 5,411,544 and Helland, et al., U.S. Patent 5,318,572, as applied to claim 11 above, and further in view of MacGregor, U.S. Patent 4,936,317.

Mar does not disclose titanium microspheres are dimensioned to attract circulating blood cells so as to develop a uniform and tightly adherent biologic surface. However, MacGregor

discloses titanium microspheres are dimensioned to attract circulating blood cells so as to develop a uniform and tightly adherent biologic surface (column 1, lines 57–60; column 2, lines 61–67; column 3, lines 33, 58–60; column 5, lines 32–33) rendering the surface non-thrombogenic and resistant to the formation of blood clots (column 2, lines 67–68; column 1, lines 60–61).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the inventions of Mar and Helland to include titanium microspheres are dimensioned to attract circulating blood cells so as to develop a uniform and tightly adherent biologic surface, as taught by MacGregor rendering the surface non-thrombogenic and resistant to the formation of blood clots (column 2, lines 67–68; column 1, lines 60–61).

Conclusion

10. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Terri L. Smith whose telephone number is 571-272-7146. The Examiner can normally be reached on Monday - Friday, between 7:30 a.m. - 4:00 p.m..

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Angela Sykes can be reached on 571-272-4955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TLS
October 12, 2005
12 October 2005

GEORGE R. EVANISKO
PRIMARY EXAMINER
10/12/05